

Abstract of the Disclosure

5 A semiconductor device has a semiconductor die (12)
mounted to a leadframe (25). The semiconductor die is a
power semiconductor device. A thermally conductive
overmolding compound (22) is formed over the
semiconductor die. The overmolding compound is made with
a thermally conductive epoxy that conducts heat in the
range of 2-5 watts/meter K. A pin-fin heat sink (24) is
10 mounted to a top surface of the thermally conductive
overmolding compound. The heat sink has a solid base
(28) with a plurality of pin-fins (30) extending from the
base. Scour lines (40) are cut in the base between the
pin-fins. The heat generated by the semiconductor die is
15 dissipated through the thermally conductive overmolding
compound to the pin-fin heat sink.